

# DuPont™ Delrin® 500SC NC010

## ACETAL RESIN

### Product Information

Common features of Delrin® acetal resins include mechanical and physical properties such as high mechanical strength and rigidity, excellent fatigue and impact resistance, as well as resistance to moisture, gasoline, lubricants, solvents, and many other neutral chemicals. Delrin® acetal resins also have excellent dimensional stability and good electrical insulating characteristics. They are naturally resilient, self-lubricating, and available in a variety of colors and speciality grades.

Delrin® acetal resin typically is used in demanding applications in the automotive, domestic appliances, sports, industrial engineering, electronics, and consumer goods industries.

**Delrin® 500SC is a masterbatch of 20% silicone fluid in Delrin® 500P. It is designed for cube-blending with any grade of Delrin® to provide lubrication to the surface of molded parts.**

The below data reflect the properties of a 10:1 blend of Delrin® 500P NC010:Delrin® 500SC NC010.

| General information                         | Value  | Unit              | Test Standard        |
|---|--------|-------------------|----------------------|
| Resin Identification                        | POM-SD | -                 | ISO 1043             |
| Part Marking Code                           | POM-SD | -                 | ISO 11469            |
| Mechanical properties                       | Value  | Unit              | Test Standard        |
| Tensile Modulus                             | 3000   | MPa               | ISO 527-1/-2         |
| Yield stress                                | 66     | MPa               | ISO 527-1/-2         |
| Yield strain                                | 21     | %                 | ISO 527-1/-2         |
| Nominal strain at break                     | 40     | %                 | ISO 527-1/-2         |
| Flexural Modulus                            | 2900   | MPa               | ISO 178              |
| Flexural Stress at 3.5%                     | 75     | MPa               | ISO 178              |
| Charpy impact strength, 73°F                | 270    | kJ/m <sup>2</sup> | ISO 179/1eU          |
| Charpy notched impact strength, 73°F        | 8.5    | kJ/m <sup>2</sup> | ISO 179/1eA          |
| Thermal properties                          | Value  | Unit              | Test Standard        |
| Melting temperature, 18°F/min               | 176    | °C                | ISO 11357-1/-3       |
| Temp. of deflection under load              |        |                   | ISO 75-1/-2          |
| 260 psi                                     | 96     | °C                |                      |
| 65 psi                                      | 158    | °C                |                      |
| Coeff. of linear therm. expansion, parallel | 100    | E-6/K             | ISO 11359-1/-2       |
| Coeff. of linear therm. expansion           |        |                   | ISO 11359-1/-2       |
| normal                                      | 110    | E-6/K             |                      |
| Normal, -40-23°C                            | 110    | E-6/K             |                      |
| Parallel, -40-23°C                          | 100    | E-6/K             |                      |
| Flammability                                | Value  | Unit              | Test Standard        |
| FMVSS Class                                 | B      | -                 | ISO 3795 (FMVSS 302) |
| Burning rate, Thickness 1 mm                | <100   | mm/min            | ISO 3795 (FMVSS 302) |
| Other properties                            | Value  | Unit              | Test Standard        |
| Density                                     | 1410   | kg/m <sup>3</sup> | ISO 1183             |

### Characteristics

|                       |                             |
|-----------------------|-----------------------------|
| Processing            | • Injection Molding         |
| Delivery form         | • Pellets                   |
| Additives             | • Lubricants                |
| Regional Availability | • North America<br>• Europe |
|                       | • Release agent             |
|                       | • Asia Pacific              |
|                       | • South and Central America |
|                       | • Near East/Africa          |
|                       | • Global                    |

### Processing Texts

#### Injection molding

##### PROCESSING

As a first indication, please use molding parameters of the product with which Delrin® 500SC is blended.

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

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measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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